

## Resource Recommendations

### *Visible Human Project Phase I*

The panel recognizes that its recommendations include a specific first project in building digital image libraries, and a more general endorsement of support for research to enable the fullest usage of such libraries. In the short term, the costs of undertaking the data acquisition phase of the Visible Human Project can be derived from existing technologies and similar projects undertaken on a smaller scale. The panel estimates that Phase I of this project would require approximately \$1 million and yield a uniquely valuable image data set.

### *Phase II*

Phase II of the Visible Human Project--the classification of the image data--is considerably more labor and time intensive if undertaken using current manual or semi-automated methods, such as contour tracing by skilled anatomists. Between 40 and 50 man-years of effort would be required, at a cost of approximately \$5 million, to fully classify the anatomic data.

### *Structural Informatics Research*

The panel encourages the NLM to provide research support to develop automated image processing tools for improving the speed and efficiency of biomedical image classification. Research to develop new methods for representing and linking structural and symbolic data in the life sciences is also needed. Support for 5-10 high quality investigator-initiated grants annually would greatly facilitate progress in these areas, at an estimated cost of \$3 million.

### *Computer Networks*

NLM connection to high speed computer networks is an extension of its current connections to NSFnet and the research Internet through the Lister Hill Center. The panel believes that over the next several years incremental improvement in bandwidth should be available to the NLM at approximately the same annual cost as it now bears (approximately \$100,000 per year). Experimental projects involving commercial telecommunications networks should be pursued under collaborative cost-sharing agreements.